FINANCIAL ASSISTANCE
FUNDING OPPORTUNITY ANNOUNCEMENT

U.S. Department of Energy
Office of Science
Office of Advanced Scientific Computing Research

Early Career Principal Investigator Program in Applied Mathematics, Computer Science, and High-Performance Networks

Funding Opportunity Number: DE-FG01-05ER05-25

CFDA Number: 81.049

CONTACT: Dr. Thomas Ndousse-Fetter
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Issue Date: **09/09/2005**

Application Due Date: **01/31/2006 at 8:00 PM Eastern Time**

Information regarding this solicitation is available on the Department of Energy's Industry Interactive Procurement System (IIPS) website at: http://e-center.doe.gov.

NOTE: NEW REQUIREMENTS FOR GRANTS.GOV

Where to Submit

Applications must be submitted through Grants.gov to be considered for award.

Registration Requirements

There are several one-time actions you must complete in order to submit an application through Grants.gov (e.g., obtain a Dun and Bradstreet Data Universal Numbering System (DUNS) number, register with the Central Contract Registry (CCR), register with the credential provider, and register with Grants.gov). See http://www.grants.gov/GetStarted. Use the Grants.gov Organization Registration Checklist at http://www.grants.gov/assets/OrganizationRegCheck.doc to guide you through the process. Designating an E-Business Point of Contact (EBiz POC) and obtaining a special password called an MPIN are important steps in the CCR registration process. Applicants, who are not registered with CCR and Grants.gov, should allow at least 14 days to complete these requirements. It is suggested that the process be started as soon as possible.

VERY IMPORTANT – Download PureEdge Viewer

In order to download the application package, you will need to install PureEdge Viewer. This small, free program will allow you to access, complete, and submit applications electronically and securely. For a free version of the software, visit the following web site: http://www.grants.gov/DownloadViewer.

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PART I – FUNDING OPPORTUNITY DESCRIPTION

SUMMARY: The Office of Advanced Scientific Computing Research (ASCR) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving grant applications in support of its Early Career Principal Investigator Program (ECPI). The overall objective the ECPI program is to stimulate academic research in scientific areas of interest to ASCR programs, especially among faculty in the early stages of their academic profession. The specific research areas of interest to ASCR include: applied mathematics, computer science, and high-performance networks. The full text of Program Notice DE-FG01-05ER05-25; is available via the Internet using the following web site address: http://www.science.doe.gov/grants/.

SUPPLEMENTARY INFORMATION:

The mission of ASCR, carried out by the MICS division, is to deliver forefront computational and networking capabilities to scientists nationwide that enable them to extend the frontiers of science, answer critical questions that range from the function of living cells to the power of fusion energy. The MICS division is responsible for discovering, developing, and deploying computational sciences tools, terascale computing facilities, and high-performance networking facilities that researchers need to analyze, model, simulate, and – most importantly – predict the behavior of complex natural and engineered systems of importance to DOE science mission.

ASCR programs achieve the mission objective by fostering and supporting fundamental research activities in advanced scientific research the execution of the following research and development strategies:

Build leading research programs in focused disciplines of applied mathematics and computer science that enable scientific simulation and modeling codes to take full advantage of the extraordinary capabilities of terascale computers.

Create advanced networking technologies and distributed software infrastructure to spur revolutionary advances in the use of high performance computers and networks, which enable geographically-separated scientists to effectively work together as a team, as well as provide electronic access to both facilities and data.

To establish and maintain DOE's modeling and simulation leadership in scientific areas that are important to its mission, the MICS program employs a broad, but integrated, research strategy. The basic research portfolio in applied mathematics and computer science provides the foundation for enabling research activities, which includes efforts to advance high-performance networking, to develop software tools, software libraries, and software environments. Results from enabling research supported by the MICS program are used by computational scientists supported by other SC and other DOE programs.

Further descriptions of the base research portion of the MICS portfolio, which is the scope of this Notice, are provided below:

Topic I: Applied Mathematics Research

Research on the underlying mathematical understanding as well as the numerical algorithms needed to enable effective description and prediction of physical, chemical, and biological systems of importance to the Office of Science - such as fluids, materials, magnetized plasmas, or protein molecules (to cite just a few examples) – is sought. This may include, but is not limited to, methods for solving large systems of partial differential equations (PDEs) on parallel computers: techniques for choosing optimal values for parameters in large systems with hundreds to hundreds of thousands of parameters; improving our understanding of fluid turbulence; research in multiscale algorithms; the mathematics of feature identification in large datasets; asymptotically optimal algorithms for solving PDEs; fast multipole and related hybrid methods; algorithms for handling complex systems with constraints; and developing techniques for reliably estimating the errors in simulations of complex physical phenomena. In addition to the research topics mentioned above, MICS is open to investment in new areas of applied mathematics research to support the Office of Science's mission.

Grant applications targeting this topic must emphasize applied mathematics over the underlying science problems. The proposed mathematic research activities must be clearly identified in grant applications and must be designated as "Applied Math" in the subtitle. Grant applications which concentrate on solving specific science problems with complex mathematical formulation will be considered non-responsive.

Topic II: Computer Science Research

The objective of the computer science component of the MICS research portfolio is to support research that results in a comprehensive, scalable, and robust high performance software infrastructure that translates the promise and potential of high peak performance to real performance improvements in DOE scientific applications. This software infrastructure must address needs for: portability and interoperability of complex high performance scientific software packages; operating systems tools and support for the effective management of terascale and beyond systems; and effective tools for feature identification, data management, and visualization of petabytes-scale scientific data sets. The computer science component encompasses a multi-discipline approach with activities in:

1) Program development environments and tools - Component-based, fully integrated, terascale program development and runtime tools, which scale effectively and provide maximum performance, functionality, and ease-of-use to developers and scientific end users.

2) Operating system software and tools - Systems software that scales to tens of thousands of processors, supports high performance application-level communication, and provides the highest levels of performance, fault tolerance, reliability, manageability, and ease of use for system administrators, tool developers, and end users.

3) Visualization and data management systems - Scalable, intuitive systems fully supportive of DOE application requirements for moving, storing, analyzing, querying, manipulating, and visualizing multi-petabytes of scientific data and objects.

4) Performance Measurement and Analysis -- Tools and methodology to enable improved understanding of end-to-end application performance, identify performance bottlenecks, and support rapid testing of code performance enhancements.

The MICS research portfolio in computer science emphasizes investment in long-term research that will result in the next generation of high performance tools for scientific discovery. Grant applications targeting this topic must be designated as “Computer Science” in the subtitle.

Topic III: High-Performance Networks and Middleware

The goal of the network research program in the MICS division is to conduct basic and applied research on high-capacity network technologies needed to interconnect science facilities and to provide unfettered access to terascale computing resources data repositories. The current focus of network research activities is on advanced ultra high-speed and high-capacity network technologies. This may include but are not limited to the following:

1) Ultra high-speed network protocols – Innovative, new approaches to transport protocols to harness the abundant bandwidth made possible by Dense Wave Division Multiplexing (DWDM) optical technologies.

2) Agile system-level optical networks – Advanced switching network technologies to enable end-to-end dynamic provisioning services such on-demand circuits, guaranteed bandwidth, control and signaling plane technologies, and advanced optical network services.

3) Cyber security systems – Formal techniques for modeling and evaluating the performance of cyber security systems. This may include techniques for formal specification of cyber security requirements and implementation.

4) High-performance middleware – Advanced network services that enable the coupling of scientific applications to the underlying high-speed networks.

5) Optimization techniques for complex networks – Advanced techniques for modeling complex traffic processes in ultra high-speed networks.

Grant applications addressing the above problems must go beyond the development of tools and emphasize mathematical analysis, formal specification, and rigorous techniques for validating the performance of their proposed solutions. The MICS division operates a production high-speed network called ESnet (http://www.es.net) and an experimental ultra high-speed network called Ultra-Science Net (http://www.csm.ornl.gov/ultranet) available to researchers. Applicants are encouraged to proposed research activities that make extensive use of these networks, especially Ultra-Science Net testbed. Grant applications targeting high performance network research subtopic must be designated as “High-Performance Networks” in the subtitle.

Background: Early Career Principal Investigator Program

This is the third year of the Early Career Principal Investigator Program. A principal goal of this program is to identify exceptionally talented applied mathematicians, computer scientists, and high-performance networks researchers early in their careers and assist and facilitate the development of their research programs. Eligibility for awards under this notice is restricted to applicants who meet all of the following criteria:

1) Hold a PhD or equivalent degree and be employed in a full-time tenure-track position or equivalent position as an assistant professor at an institution in the U.S., its territories or possessions, or the Commonwealth of Puerto Rico.

2) Be within the first or second year of their first tenure track appointment at the date of submitting this grant application. The date of the applicant's first tenure track appointment must be clearly marked in CV and in the abstract of the proposal.

3) Hold no active or pending awards at the date of this submission that will prevent the applicant from devoting a substantial time (at least summer month) to their ECPI project.

Applications should be submitted through an institution in the U.S., its territories, or the Commonwealth of Puerto Rico that awards advanced degree in a field mathematical, network, and computing sciences supported by the MICS division at DOE. Applicants should request support under this notice for normal research project costs as required conducting their proposed research activities, such as part of the PI's salary, graduate and/or undergraduate students, post-doctoral researchers, equipment and facilities, and travel. However, no salary support will be provided for other faculty members or senior personnel. Travel budget should not be more than 6% of the budget of the award and should not include foreign travel.

Applicants who have submitted or will be submitting similar grant applications to other programs are eligible for this notice, as long as the details of the other submission are contained in the grant application to DOE. Applicants who have an NSF CAREER award, or are applying for such an award, are eligible for this notice. However, applicants will be required to disclose information on all their current and pending awards. Applicants do not have to be U.S. citizens, and may be non-permanent resident aliens or have an H1b visa.

In selecting experimental applications for funding, the Mathematical, Informational, and Computational Sciences (MICS) division will give priority to applications that have the potential of establishing new research directions in the areas of interest to DOE computational sciences and networks priorities outlined in this announcement.

To facilitate the review process, all applications should be limited to a maximum of twenty-five (25) pages (including text and figures) of technical information. Applications exceeding these page limits may be rejected without review. The PDF file may also include a few selected publications in an Appendix as background information. In addition, in the electronic submission, please limit biographical and publication information for the principal investigator and key personnel to no more than two pages each. Each principal investigator should provide an e-mail address. The page count of 25 does not include the face page, budget pages, title page, the biographical material and publication information, or any appendices. However, it is important that the 25-page technical information section provide a complete description of the proposed work, since reviewers are not obliged to read the appendices.

PART II – AWARD INFORMATION

A. TYPE OF AWARD INSTRUMENT

The Office of Advanced Scientific Computing Research (ASCR) of the Office of Science (SC), U.S. Department of Energy (DOE) anticipates awarding grants under this Program Announcement:

B. ESTIMATED FUNDING

It is anticipated that up to $2 million will be available for up to twenty (20) awards for exceptional applications in Fiscal Year 2006, to meet the needs of the program, contingent upon the availability of appropriated funds. The maximum support that can be requested under this notice is $100,000 per year for three years. Grant applications requesting more that $100,000/per year will not reviewed.

Multiple-year funding of grant awards is expected, with funding provided on an annual basis subject to the availability of funds, progress of the research, and programmatic needs. The typical duration of these grants is three years, *and they will not normally be renewed after the project period has been completed.* It is anticipated that at the end of the grant period, grantees will submit new grant applications to continue their research to DOE or other Federal funding agencies. We expect that the awards will be announced and the projects will begin in early summer 2006.

C. MAXIMUM AND MINIMUM AWARD SIZE.

- Ceiling (i.e., the maximum amount for an individual award made under this announcement): $ NONE

- Floor (i.e., the minimum amount for an individual award made under this announcement): $ NONE

PART III - ELIGIBILITY INFORMATION

A. ELIGIBLE APPLICANTS.

- All types of applicants are eligible to apply, except other Federal agencies, Federally Funded Research and Development Center (FFRDC) Contractors, and nonprofit organizations described in section 501(c)(4) of the Internal Revenue Code of 1986 that engaged in lobbying activities after December 31, 1995.

B. COST SHARING

Cost sharing is not required.

C. OTHER ELIGIBILITY REQUIREMENTS.

Federally Funded Research and Development Center (FFRDC) Contractors.
FFRDC applicants are not eligible for an award. A list of the FFRDC contractors is available at http://www.nsf.gov/sbe/srs/ffrdc/start.htm. However, an application that includes performance of a portion of the work by a FFRDC contractor will be evaluated and considered for award. (See Section VIII).

PART IV – APPLICATION AND SUBMISSION INFORMATION

A. ADDRESS TO REQUEST APPLICATION PACKAGE

Application forms and instructions are available at Grants.gov. To access these materials, go to http://www.grants.gov, select "Apply for Grants," and then select "Download Application Package." Enter the CFDA (81.049) and/or the funding opportunity number (DE-FG01-05ER05-25) located on the cover of this announcement. Select "Download Application Package," and then follow the prompts to download the application package. To download the instructions, go to "Download Application Package" and select "Instructions." NOTE: You will not be able to download the Application Package unless you have installed PureEdge Viewer.

B. LETTER OF INTENT AND PRE-APPLICATION.

1. Letter of Intent

A Letter-of-Intent (LOI) to submit an application is REQUIRED and should be submitted by October 31, 2005. Failure to submit the LOI by the due date may preclude the full application from due consideration for award. Formal applications will be accepted only from applicants whose LOI is determined to be responsive to the announcement.

Letters-of-Intent should be submitted electronically by email to Dr. Thomas D. Ndousse-Fetter at ecpi@mics.doe.gov citing "Letter-of-Intent for Notice DE-FG01-05ER05-25 ECPI-2006" in the subject line of the email. The purpose of the LOI is to expedite the planning of the review of the applications. For this purpose, the LOI should contain a one-page abstract of the proposed research, together with a list of potential collaborators and their institutional affiliations, to enable potential conflict of interest issues to be determined in relation to the review.

2. Pre-application

Pre-applications are not required.

C. SUBMISSION DATES AND TIMES

1. Pre-application Due Date

Pre-applications are not required.

2. Application Due Date

Formal applications submitted in response to this notice must be received by DOE no later than 8:00 p.m., Eastern Time, January 31, 2006, to be accepted for merit review and to permit timely consideration for award in Fiscal Year 2006. Awardees are expected to be selected and announced by March 31, 2006. Electronic submission of formal applications in PDF format is REQUIRED.

C. CONTENT AND FORM OF APPLICATION – SF 424 (R&R)

You must complete the mandatory forms and any applicable optional forms in accordance with the instructions on Grants.gov R&R form and the additional instructions below. To activate the instruction on the R&R form click on the "Help Mode" icon (This is the icon with pointer and question mark on the menu bar). **Files that are attached to the forms must be in Adobe Portable Document Format (PDF).**

1. **SF 424 (R&R).**
   Complete this form first to populate data in other forms. Complete all the required fields in accordance with the pop-up instructions on the form. To activate the instructions, turn on the "Help Mode" (Icon with the pointer and question mark at the top of the form). The list of certifications and assurances referenced in Field 18 can be found on the Applicant and Recipient Page at http://grants.pr.doe.gov.

2. **RESEARCH AND RELATED Project/Performance Site Location(s).** Indicate the primary site where the work will be performed. If a portion of the project will be performed at any other site(s), identify the site(s).

3. **RESEARCH AND RELATED Other Project Information.**

   Complete questions 1 through 5 and attach files in blocks 6-11, as necessary. The attached files must provide the information specified in the application instructions and the following additional instructions:

   Block 6 - Project Summary/Abstract

   The project summary/abstract must contain a summary of the proposed activity suitable for dissemination to the publication. It should be a self-contained document that identifies the name of the applicant, the project director/principal investigator(s), the project title, the objectives of the project, a description of the project, including methods to be employed, the potential impact of the project (i.e., benefits, outcomes), and major participants (for collaborative projects). This document must not include any proprietary or sensitive business information as the Department may make it available to the public. The project summary must not exceed 1 page when printed using standard 8.5" by 11" paper with 1" margins (top, bottom, left and right) with font not smaller than 11 point.

   Block 7 - Project Narrative

   The first page of your narrative must include the following information:

   Applicant/Institution:

   Street Address/City/State/Zip:

Principal Investigator:

Address:

Telephone Number:

Email:

DOE/Office of Science Program Office:

DOE/Office of Science Program Office Technical Contact:

Grant Number (if Renewal or Supplemental Application):

Is this a Collaboration? If yes, please list ALL Collaborating Institutions/PIs* and indicate which ones will also be submitting financial assistance applications.

**** Note that collaborating university applications must be submitted separately.***

To facilitate the review process, all applications should be limited to a maximum of twenty-five (25) pages (including text and figures) of technical information. Applications exceeding these page limits may be rejected without review. The PDF file may also include a few selected publications in an Appendix as background information. In addition, in the electronic submission, please limit biographical and publication information for the principal investigator and key personnel to no more than two pages each. Each principal investigator should provide an e-mail address. The page count of 25 does not include the face page, budget pages, title page, the biographical material and publication information, or any appendices. However, it is important that the 25-page technical information section provide a complete description of the proposed work, since reviewers are not obliged to read the appendices.

***Blocks 8, 9, and 10 - Bibliography & References Cited; Facilities & Other Resources; and Equipment*.**

Literature Cited
Provide a bibliography of any references cited in the Project Narrative. Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers, and year of publication. Include only bibliographic citations. Proposers should be especially careful to follow scholarly practices in providing citations for source materials relied upon when preparing any section of the application.

Description of Facilities and Resources
This information is used to assess the capability of the organizational resources available to perform the effort proposed. Identify the facilities to be used (Laboratory, Animal, Computer, Office, Clinical and Other). If appropriate, indicate their capacities, pertinent capabilities, relative proximity and extent of availability to the project. Describe only those resources that are directly applicable to the proposed

work. Provide any information describing the Other Resources available to the project (e.g., machine shop, electronic shop) and the extent to which they would be available to the project. Include this information for each subcontracting institution (if any).

Block 11 - Other Attachments:

If you need to elaborate on your responses to questions 1-5 on the "Other Project Information" document, attach a file in block 11. Also, attach the following files:

Budgets for Subawardees. You must provide a separate budget, prepared on a plain sheet of paper, for each subawardee that is expected to perform work estimated to be more than $100,000 or 50 percent of the total work effort (whichever is less).

Appendix (optional)
Information not easily accessible to a reviewer may be included in an appendix, but **do not use the appendix to circumvent the page limitations of the application.** Reviewers are not required to consider information in an appendix, and reviewers may not have time to read extensive appendix materials with the same care they would use with the application proper.

The appendix may contain the following items: up to five publications, manuscripts accepted for publication, abstracts, patents, or other printed materials directly relevant to this project, but not generally available to the scientific community; and letters from investigators at other institutions stating their agreement to participate in the project (do not include letters of endorsement of the project).

4. RESEARCH AND RELATED Senior/Key Person.

Complete the required profile information for each senior/key person proposed. A senior/key person is any individual who contributes in a substantive, measurable way to the scientific/technical development or execution of the project, whether or not a salary is proposed for this individual. Consultants should be included if they meet this definition. For each senior/key person provide:

***Biographical Sketch* (2 pages maximum)**

Provide a biographical sketch for the project director/principal investigator (PD/PI) and each senior/key person listed in Section A on the R&R Budget form. Provide the biographical sketch information as an appendix to your project narrative. Do not attach a separate file. The biographical sketch appendix will not count in the project narrative page limitation. The biographical information for each person must not exceed 2 pages when printed on 8.5" by 11" paper with 1 inch margins (top, bottom, left, and right) with font not smaller than 11 point and must include:

Education and Training. Undergraduate, graduate and postdoctoral training, provide institution, major/area, degree and year.

Research and Professional Experience: Beginning with the current position list, in chronological order, professional/academic positions with a brief description.

Publications. Provide a list of up to 10 publications most closely related to the proposed project. For each publication, identify the names of all authors (in the same sequence in which they appear in the publication), the article title, book or journal title, volume number, page numbers, year of publication, and website address if available electronically.

Patents, copyrights and software systems developed may be provided in addition to or substituted for publications.

Synergistic Activities. List no more than 5 professional and scholarly activities related to the effort proposed.

Collaborators and Co-editors: A list of all persons in alphabetical order (including their current organizational affiliations) who are currently, or who have been, collaborators or co- authors with the investigator on a research project, book or book article, report, abstract, or paper during the 48 months preceding the submission of the application. Also include those individuals who are currently or have been co-editors of a special issue of a journal, compendium, or conference proceedings during the 24 months preceding the submission of the application. If there are no collaborators or co-editors to report, this should be so indicated.

Graduate and Postdoctoral Advisors and Advisees: A list of the names of the individual's own graduate advisor(s) and principal postdoctoral sponsor(s), and their current organizational affiliations. A list of the names of the individual's graduate students and postdoctoral associates during the past 5 years, and their current organizational affiliations.

Current and Pending Support

Other support is defined as all financial resources, whether Federal, non-Federal, commercial, or institutional, available in direct support of an individual's research endeavors. Information on active and pending other support is required for all senior personnel, including investigators at collaborating institutions to be funded by a subcontract. For each item of other support, give the organization or agency, inclusive dates of the project or proposed project, annual funding, and level of effort (months per year or percentage of the year) devoted to the project.

5. RESEARCH AND RELATED BUDGET.

Complete the Research and Related Budget form in accordance with the instructions. This form allows you to complete up to five separate budget years. You must complete a separate budget for each year of support requested. The form will generate a cumulative budget for the total project period. You may request funds under any of the categories listed as long as the item and amount are necessary to perform the proposed work and are not precluded by the cost principles or the funding restrictions in this announcement (See Section IV, G)

Block K - Budget Justification
Provide the required supporting information (See "Help Mode" instructions on the R&R budget form) for the following costs: equipment; domestic and foreign travel; participant/trainees; material and supplies; publication; consultant services; ADP/computer services; subaward/consortium/contractual; equipment or facility rental/user fees; alterations and renovations; and indirect cost type. Provide any other information you wish to submit to justify your budget request. Attach the budget justification file in Block K.

E. SUBMISSIONS FROM SUCCESSFUL APPLICANTS

The Department anticipates that no additional submissions will be required. However, it reserves the right to request additional or clarifying information for any reason deemed necessary.

F. INTERGOVERNMENTAL REVIEW

This program is not subject to Executive Order 12372 – Intergovernmental Review of Federal Programs.

G. FUNDING RESTRICTIONS

Cost Principles**.** Costs must be allowable in accordance with the applicable cost principles referenced in 10 CFR part 600.

Pre-award Costs**.** Recipients may charge to an award resulting from this announcement pre-award costs that were incurred within the ninety (90) calendar day period immediately preceding the effective date of the award, if such costs would be reimbursable under the agreement if incurred after the agreement is awarded. Recipients must obtain the prior approval of the contracting officer for any pre-award costs that are for periods greater than this 90 day calendar period.

Pre-award costs are incurred at the applicant's risk. DOE is under no obligation to reimburse such costs if for any reason the applicant does not receive an award or if the award is made for a lesser amount than the applicant expected.

H. OTHER SUBMISSION AND REGISTRATION REQUIREMENTS

1. Where to Submit

APPLICATIONS MUST BE SUBMITTED THROUGH GRANTS.GOV TO BE CONSIDERED FOR AWARD.

Submit electronic applications through the "Apply for Grants" function at www.Grants.gov. If you have problems completing the registration process or submitting your application, call Grants.gov at 1-800-518-4726 or send an email to support@grants.gov.

2. Grants.gov Registration Process

You must COMPLETE the one-time registration process (all steps) before you can submit your first application through Grants.gov (See www.grants.gov/GetStarted). We recommend that you start this process as soon as possible. **It may take at least 14 days to complete the entire process.** Use the Grants.gov Organization Registration Checklist at http://www.grants.gov/assets/OrganizationRegCheck.doc to guide you through the process. We strongly recommend that you download and complete the checklist for each registration step, particularly the Central Contractor Registry (CCR) checklist, before contacting the registering entity. These checklists are found at *http://www.grants.gov/RegistrationChecklist#ccr*.

Part V - APPLICATION REVIEW INFORMATION

A. CRITERIA

1. Initial Review Criteria

Prior to a comprehensive merit evaluation, DOE will perform an initial review in accordance with 10 CFR 605.10(b).

2. Merit Review Criteria

Applications will be subjected to scientific merit review (peer review) and will be evaluated against the following criteria, listed in descending order of importance as found in 10 CFR Part 605.10 (d), the Office of Science Research Financial Assistance Program:

1. Scientific and/or technical merit of the project;
2. Appropriateness of the proposed method or approach;
3. Competency of applicant's personnel and adequacy of proposed resources;
4. Reasonableness and appropriateness of the proposed budget.

Additional criteria, which will be considered: Future promise of the investigator, and the resources and interest of the sponsoring institution.

B. REVIEW AND SELECTION PROCESS

1. Merit Review

Applications will be subjected to formal merit review (peer review) and will be evaluated against the evaluation criteria codified at 10 CFR 605.10(d) listed above, as well as the additional criteria listed above.

2. Selection

The Selection Official will consider the merit review recommendation, program policy factors, and the amount of funds available.

3. Discussions and Award

The Government may enter into discussions with a selected applicant for any reason deemed necessary, including but not limited to: (1) the budget is not appropriate or reasonable for the requirement; (2) only a portion of the application is selected for award; (3) the Government needs additional information to determine that the recipient is capable of complying with the requirements in 10 CFR part 600; and/or (4) special terms and conditions are required. Failure to resolve satisfactorily the issues identified by the Government will preclude award to the applicant.

D. ANTICIPATED NOTICE OF SELECTION AND AWARD DATES

DOE expects to make several awards by June 30, 2006.

Part VI - AWARD ADMINISTRATION INFORMATION

A. AWARD NOTICES

1. Notice of Selection

DOE will notify applicants selected for award. This notice of selection is not an authorization to begin performance. (See Section IV.G with respect to the allowability of pre-award costs.)

Organizations whose applications have not been selected will be advised as promptly as possible. This notice will explain why the application was not selected.

2. Notice of Award

A Notice of Financial Assistance Award issued by the contracting officer is the authorizing award document. It normally includes, either as an attachment or by reference: 1. Special Terms and Conditions; 2. Applicable program regulations, if any; 3. Application as approved by DOE.; 4. DOE assistance regulations at 10 CFR Part 600, or, for Federal Demonstration Partnership (FDP) institutions, the FDP terms and conditions; 5. National Policy Assurances; To Be Incorporated As Award Terms; 6. Budget Summary; and 7. Federal Assistance Reporting Checklist, which identifies the reporting requirements.

B. ADMINISTRATIVE AND NATIONAL POLICY REQUIREMENTS

1. Administrative Requirements.

The administrative requirements for DOE grants and cooperative agreements are contained in 10 CFR part 600 (See: http://ecfr.gpoaccess.gov), except for grants made to Federal Demonstration Partnership (FDP) institutions. The FDP terms and conditions and DOE FDP agency specific terms and conditions are located on the National Science Foundation web site at http://www.nsf.gov/awards/managing/fed_dem_part.jsp.

2. Special Terms and Conditions and National Policy Requirements.

Special Terms and Conditions and National Policy Requirements.
The DOE Special Terms and Conditions for Use in Most Grants and Cooperative Agreements and National Policy Assurances To Be Incorporated As Award Terms are located at http://grants.pr.doe.gov.

Intellectual Property Provisions.
The standard DOE financial assistance intellectual property provisions applicable to the various types of recipients are located at

http://www.gc.doe.gov/techtrans/sipp_matrix.html.

C. REPORTING

Reporting requirements are identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, attached to the award agreement.

PART VII - QUESTIONS/AGENCY CONTACTS

A. CONTACTS

Questions relating to the Grants.gov system or on how to submit an application should be directed to support@grants.gov or 1-800-518-4726.

Questions regarding the Program Announcement (**administrative**) should be directed to Lori Jernigan, email: Lori.Jernigan@science.doe.gov .

Questions regarding the program (**technical**) requirements should be directed to: Dr. Thomas D. Ndousse, Office of Advanced Scientific Computing Research, SC-21.1/Germantown Building, U.S. Department of Energy, 1000 Independence Avenue, SW, Washington, DC 20585-1290, Telephone: (301) 903-5800, E-mail: ecpi@mics.doe.gov

B. ELECTRONIC QUESTIONS

Questions regarding the content of the announcement should be submitted through the "Submit Question" feature of the DOE Industry Interacitve Procurement System (IIPS) at http://e-center.doe.gov. Locate the program announcement on IIPS and then click on the "Submit Question" button. Enter required information. You will receive an electronic notification that your question has been answered. DOE will try to respond to a question within 3 days, unless a similar question and answer have already been posted on the website.

Responses to questions may be viewed through the "View Questions" feature button. If no questions have been answered, a statement to that effect will appear. You should periodically check "View Questions" for new questions and answers.

Questions regarding how to submit questions or view responses can be e-mailed to the IIPS HELP Desk at helpdesk@pr.doe.gov or by calling: 1 (800) 683-0751.

PART VIII - OTHER INFORMATION

A. MODIFICATIONS.

Notices of any modifications to this announcement will be posted on Grants.gov and the DOE Industry Interactive Procurement System (IIPS). You can receive an email when a modification or an announcement message is posted by joining the mailing list for this announcement through the link in IIPS. When you download the application at Grants.gov, you can also register to receive notifications of changes through Grants.gov.

B. GOVERNMENT RIGHT TO REJECT OR NEGOTIATE.

DOE reserves the right, without qualification, to reject any or all applications received in response to this announcement and to select any application, in whole or in part, as a basis for negotiation and/or award.

C. COMMITMENT OF PUBLIC FUNDS.

The Contracting Officer is the only individual who can make awards or commit the Government to the expenditure of public funds. A commitment by other than the Contracting Officer, either explicit or implied, is invalid.

D. PROPRIETARY APPLICATION INFORMATION.

Patentable ideas, trade secrets, proprietary or confidentional commercial or financial information, disclosure of which may harm the applicant, should be included in an application only when such information is necessary to convey an understanding of the proposed project. The use and disclosure of such data may be restricted, provided the applicant includes the following legend on the first page of the project narrative and specifies the pages of the application which are to be restricted:

"The data contained in pages _____ of this application have been submitted in confidence and contain trade secrets or proprietary information, and such data shall be used or disclosed only for evaluation purposes, provided that if this applicant receives an award as a result of or in connection with the submission of this application, DOE shall have the right to use or disclose the data herein to the extent provided in the award. This restriction does not limit the government's right to use or disclose data obtained without restriction from any source, including the applicant."

To protect such data, each line or paragraph on the pages containing such data must be specifically identified and marked with a legend similar to the following:

"The following contains proprietary information that (name of applicant) requests not be released to persons outside the Government, except for purposes of review and evaluation."

E. EVALUATION AND ADMINISTRATION BY NON-FEDERAL PERSONNEL.

In conducting the merit review evaluation, the Government may seek the advice of qualified non-Federal personnel as reviewers. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The applicant, by submitting its application, consents to the use of non-Federal reviewers/administrators. Non-Federal reviewers must sign conflict of interest and non-disclosure agreements prior to reviewing an application. Non-Federal personnel conducting administrative activities must sign a non-disclosure agreement.

F. INTELLECTUAL PROPERTY DEVELOPED UNDER THIS PROGRAM.

Patent Rights. The government will have certain statutory rights in an invention that is conceived or first actually reduced to practice under a DOE award. 42 U.S.C. 5908 provides that title to such inventions vests in the United States, except where 35 U.S.C. 202 provides otherwise for nonprofit organizations or small business firms. However, the Secretary of Energy may waive all or any part of the rights of the United States subject to certain conditions. (See "Notice of Right to Request Patent Waiver" in paragraph G below.)

Rights in Technical Data. Normally, the government has unlimited rights in technical data created under a DOE agreement. Delivery or third party licensing of proprietary software or data developed solely at private expense will not normally be required except as specifically negotiated in a particular agreement to satisfy DOE's own needs or to insure the commercialization of technology developed under a DOE agreement.

G. NOTICE OF RIGHT TO REQUEST PATENT WAIVER.

Applicants may request a waiver of all or any part of the rights of the United States in inventions conceived or first actually reduced to practice in performance of an agreement as a result of this announcement, in advance of or within 30 days after the effective date of the award. Even if such advance waiver is not requested or the request is denied, the recipient will have a continuing right under the award to request a waiver of the rights of the United States in identified inventions, i.e., individual inventions conceived or first actually reduced to practice in performance of the award. Any patent waiver that may be granted is subject to certain terms and conditions in 10 CFR 784.

Domestic small businesses and domestic nonprofit organizations will receive the patent rights clause at 37 CFR 401.14, i.e., the implementation of the Bayh-Dole Act. This clause permits domestic small business and domestic nonprofit organizations to retain title to subject inventions. Therefore, small businesses and nonprofit organizations do not need to request a waiver.

H. PARTICIPATION BY FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTER (FFRDC) CONTRACTORS.

Federally Funded Research and Development Center (FFRDC) contractors are not eligible for an award under this announcement, but they may be proposed as a team member subject to the following guidelines:

Authorization for non-DOE/NNSA FFRDCs. The Federal agency sponsoring the FFRDC contractor must authorize in writing the use of the FFRDC contractor on the proposed project and this authorization must be submitted with the application. The use of a FFRDC contractor must be consistent with the contractor's authority under its award and must not place the FFRDC contractor in direct competition with the private sector.

Authorization for DOE/NNSA FFRDCs. The cognizant contracting officer must authorize in writing the use of a DOE/NNSA FFRDC contractor on the proposed project and this

authorization must be submitted with the application. The following wording is acceptable for this authorization.

"Authorization is granted for the _____ Laboratory to participate in the proposed project. The work proposed for the laboratory is consistent with or complimentary to the missions of the laboratory, will not adversely impact execution of the DOE/NNSA assigned programs at the laboratory, and will not place the laboratory in direct competition with the domestic private sector."

Value/Funding. The value of, and funding for, the FFRDC contractor portion of the work will not normally be included in the award to a successful applicant. Usually, DOE/NNSA will fund a DOE/NNSA FFRDC contractor through the DOE field work proposal system and other FFRDC contractors through an interagency agreement with the sponsoring agency.

Cost Share. The applicant's cost share requirement will be based on the total cost of the project, including the applicant's and the FFRDC contractor's portions of the effort.

Responsibility. The applicant, if successful, will be the responsible authority regarding the settlement and satisfaction of all contractual and administrative issues, including but not limited to, disputes and claims arising out of any agreement between the applicant and the FFRDC contractor.